Fire Line Rehabilitation Guidelines
for DNR DMLW Managed Land
July 23, 2004
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The Division of Mining, Land and Water, Northern Region Land Section's goal in the rehabilitation of fire lines is to accomplish the long-term mandate to preserve the land's ability to provide maximized economic return to the people of Alaska through maintenance of its long-term productivity, diversity of resources, and maximized future options. To do this requires stabilization of soils, both physically and thermally, and prevention of water quality degradation.

Fire line rehabilitation actions will be designed to:

- Prevent, to the extent practicable, sedimentation and lateral erosion by stabilizing the surface.
- Prevent, to the extent practicable, vertical thermal erosion.
- Stabilize and revegetate emphasizing the natural revegetation of sites through restoration techniques.
- Restore or preclude access, consistent with pre-fire conditions and DMLW plans for the area.

Major fire line rehabilitation will begin as control objectives are met and before anticipated rains occur in late July and August. Some fire line rehabilitation efforts should begin during fire line construction to prevent erosion and rutting of the fire line during suppression activities.

Features to be addressed in rehabilitation planning

Areas subject to rehabilitation actions include dozer lines, drop points, hand lines, safety zones, helispots, camps, roads, trails, and other areas where suppression actions removed the vegetative mat.

Planning and Coordination with DMLW-Land Section:

Depending on resources available to the fire organization, a Rehabilitation Specialist or other qualified individual should be retained to develop a rehabilitation plan. This is envisioned to be a cooperative effort between the DMLW and the fire organization.

The rehabilitation plan must include a detailed map showing the location of the preceding areas to be rehabilitated, along with any pertinent information on the specific fire lines regarding soil types and depth (if known), vegetation types, wetlands, stream crossings, observed permafrost or other evidence of its presence, availability of the vegetative mat for replacement if necessary, presence and location of berms, existing trails and roads, pre-existing or constructed during suppression efforts.

DMLW must be consulted:

- To determine whether the fire lines will be left open to provide access to state land or closed to the public, and the extent of rehabilitation that will occur given the site specific conditions.
- To approve the use of seed, the seed mix and sources that will be used in the rehabilitation effort.
- To approve the use of protective cover such as straw, wood chips, or other mulches in the rehabilitation efforts.
- To approve the overall rehabilitation plan.

Rehabilitation Considerations

General

- Remove all flagging and all trash/litter everywhere.
- Prevent sedimentation from entering waterbodies.
- Minimize lateral erosion by stabilizing the surface.
- Minimize vertical thermal erosion.
- Monitor the sites to determine the effectiveness of restoration actions.

Roads/Trails

- DMLW will identify roads and trails that should be blocked and those that will remain open for access.
- Clean ditches of dirt, slash, and debris that will inhibit drainage and clog culverts.
- Grade (with watering on gravel roads) damaged areas of road surfaces on access routes where damage occurred due to fire suppression actions.
- Reshape outsloped roads; remove berms; maintain or reconstruct damaged drainage structures.
- For trails identified by DNR, clear the trail of any impediments created during fire suppression. For example if trees were felled across the trail, re-establish a passable trail to the pre-fire width. This may include using debris to narrow the trail to its pre-fire condition.
- Wood chips may be obtained from onsite chipping or from local mills or other suppliers to stabilize some trails/roads.

Dozer lines/hand lines/safety zones

- Remove berms and blockages from roads, snowmachine, ATV, or dog trails where fire lines cross them.
- Pull plant or tree debris and vegetative mat, if available, back into cleared areas. Accomplishment is best achieved with use of an excavator with a 2-3 cubic yard bucket with an opposable thumb.
- Drainage control structures, waterbars/ditching, should be constructed at appropriate intervals along the fire line to prevent erosion and divert water off the fire line.

- Access to dozer lines will be blocked and disguised by reshaping to the natural contour and using a combination of available rocks, trees, slash, and vegetative mat. Do not use berms.
- Berms created by dozer lines shall be breached at intervals of 100 to 200 feet to allow access for humans and wildlife.
- In permafrost areas, reestablish the insulating layer by replacing the vegetative mat, placing trees, brush, tussocks, or mulch on the disturbed area.
- Prevent the introduction and/or spread of non-native and weed species.
- Reseeding with grass is usually not warranted due to its limited effectiveness and the risk of introducing weeds.
- The use of straw mulches carries with it a significant risk of introducing weed species. In the event straw is utilized, the State Division of Agriculture should be contacted to obtain a list of suppliers known to have the cleanest straw. Supplies should only be procured from this list.

Contact Numbers for DNR DMLW Northern Region Land Section:

Chris Milles	907-451-2711
Frank Maxwell	907-451-2728
Jeanne Proulx	907-451-2722